

Bloxham, Sefton, Boyle, Fiona and Thanaraj, Ann (2009) Using e-portfolios to support PDP and reflective learning within the law curriculum: a case study. *Journal of Information Law & Technology (JILT)*, 3 .

Downloaded from: <http://insight.cumbria.ac.uk/id/eprint/5093/>

Usage of any items from the University of Cumbria's institutional repository 'Insight' must conform to the following fair usage guidelines.

Any item and its associated metadata held in the University of Cumbria's institutional repository Insight (unless stated otherwise on the metadata record) may be copied, displayed or performed, and stored in line with the JISC fair dealing guidelines (available [here](#)) for educational and not-for-profit activities

provided that

- the authors, title and full bibliographic details of the item are cited clearly when any part of the work is referred to verbally or in the written form
- a hyperlink/URL to the original Insight record of that item is included in any citations of the work
- the content is not changed in any way
- all files required for usage of the item are kept together with the main item file.

You may not

- sell any part of an item
- refer to any part of an item without citation
- amend any item or contextualise it in a way that will impugn the creator's reputation
- remove or alter the copyright statement on an item.

The full policy can be found [here](#).

Alternatively contact the University of Cumbria Repository Editor by emailing insight@cumbria.ac.uk.

JILT 2009 (3) - Bloxham



Contents

[Abstract](#)

[1. Introduction](#)

[2. HE Policy Context](#)

[3. Research Literature](#)

[4. Implementation](#)

[4.1 The software - Pebblepad](#)

[4.2 Academic Context](#)

[4.3 Workload](#)

[4.4 Recording Achievement - Progress Files](#)

[4.5 Employability](#)

[4.6 Reflection](#)

[4.7 Assessed Web folio](#)

[4.8 Year Two](#)

[5. Evaluation of PebblePad E-portfolios](#)

[5.1 Employability](#)

[5.2 IT issues](#)

[5.3 Structure](#)

[5.4 Training](#)

[5.5 Regular Entries](#)

[5.6 Reflection](#)

[5.7 Workload](#)

[5.8 Student achievement](#)

[6. Conclusions](#)

[Endnotes](#)



Using E-portfolios to Support PDP and Reflective Learning within the Law Curriculum: A Case Study

Sefton Bloxham, Fiona Boyle & Ann Thanaraj

Department of Law

University of Cumbria

Abstract

This paper describes and evaluates a project at the University of Cumbria designed to pilot the development of e-portfolios, using PebblePad software, in support of an embedded programme of personal development planning and reflective learning within the law curriculum. The paper outlines both the national and institutional context as well as the pedagogic rationale for the project, drawing on a range of literature on PDP, e-portfolios, reflective learning and assessment. It then describes in further detail how the use of e-portfolios is

used to support PDP and reflective learning and how the programme is embedded within the curriculum. The paper then assesses the evaluative data obtained through student questionnaires, student focus groups and staff reflection. Finally, the paper concludes with some general observations on the success of pilot.

This is a **Refereed Article** published on 22nd December 2009.

Citation: Bloxham, Sefton, Fiona Boyle & Ann Thanaraj, 'Using E-portfolios to Support PDP and Reflective Learning within the Law Curriculum: A Case Study', 2009(3) *Journal of Information, Law & Technology (JILT)*, <http://go.warwick.ac.uk/jilt/2009_3/bloxham>

Keywords

PebblePad e-portfolios, personal development planning, reflective learning, employability, legal education

1. Introduction

This paper reports on a project at the University of Cumbria designed to pilot and evaluate the development of e-portfolios, using PebblePad [1] software, to support an embedded programme of personal development planning (PDP) and reflective learning within the law curriculum.

The new LLB (Law) programme (beginning September 2008) has been designed to accommodate an embedded PDP programme within the curriculum which places considerable emphasis on skills development, career awareness development and reflective learning, delivered through designated modules at each level of study. The e-portfolio pilot project was designed to support that objective and at the same time to contribute to the development of knowledge and expertise on PDP and e-portfolios within the university as well as the wider legal education community. The PDP programme is being delivered through designated modules at each level of study and is currently entering its second year of implementation (2009-10). Consequently this paper focuses on the implementation of e-portfolios within the first year Legal Skills & Method module.

The project was funded by the University's Centre for Learning & Teaching Development (CDLT[2]) and complemented the existing, JISC[3] funded, CDLT Flourish Project[4]. The pilot was also funded by the UK Centre for Legal Education (UKCLE[5]) as part of the, JISC funded, "Using e-portfolios in legal education" Project. [6]

The paper outlines the policy context and pedagogic rationale for the project and then describes in further detail how the use of e-portfolios is used to support PDP and reflective learning and how the programme is embedded within the curriculum. It will also consider a number of issues that were either identified at the outset of the project or which have emerged during its implementation. These include staff development needs in respect of IT skills and personal tutoring skills, IT challenges relating to the development of the e-portfolio templates and student access to the software, assessment issues and student ownership. The paper will go on to assess the preliminary evaluative data obtained through student questionnaires and focus group discussions. Finally, the authors will conclude with some reflections and thoughts on future developments as the current cohort progresses through the LLB programme.

2. HE Policy Context

The development of a new Qualifying Law Degree at the University of Cumbria (UoC) reflects an institutional commitment to widening access to higher education within the region and enhancing the employability prospects of students. As part of that institutional strategy, considerable emphasis is placed upon support for personal and career development opportunities. These themes reflect the policy direction originating from the 1997 Dearing Report on Higher Education, which provided the initial impetus for the introduction of Progress Files for the recording of student achievement as "a means by which students can monitor, build and reflect upon their personal development".[7] Subsequently, all UK HEIs were required to introduce "opportunities" for PDP by 2005-06, as a

“ *"structured and supported processes to develop the capacity of individuals to reflect upon their own learning and achievement, and to plan for their own personal educational and career development".*[8]

More recently, the 2007 Burgess Report proposed that by 2010-11 student achievement should be recorded by means of a Higher Education Assessment Report (HEAR) and opens up the possibility of linked student portfolios and/or e-portfolios as a further vehicle for the recording and presentation of information about their learning and achievement.[9] It is against this background that the present project has been developed.

Commenting on the potential of the Burgess proposals, Ward has warned of the dangers of separating the recording of academic achievement from the student driven, PDP related, evidence of other achievements, both curricular and extra-curricular.[10] Echoing such sentiments, one of the current authors has argued previously that PDP can be seen as having:

“ *" the potential to address two important issues at the core of higher education in the 21st century: the development of learners' skills to enhance their employability and the development of learners' reflective abilities to enhance their ability to learn ".* [11]

This emphasis on employability and reflective learning, as embodied in the decision to embed the PDP programme within the law curriculum at UoC, is taken one step further by the use of e-portfolios to support the development of "student owned" portfolios which combines a record of achievement with reflection on both skills development, career awareness and academic learning.

3. Research Literature

Much of the research on e-portfolio use begins with a discussion of the difficulties of defining an e-portfolio. [12] This is due to the wide range of formats, functions and content covered by the term. The definition used by JISC[13] is 'the **product** created by the learner, a collection of digital artefacts articulating experiences, achievements and learning.' A similar definition, also used by JISC accurately reflects the e-portfolios created as part of this project:

“ *"An e-portfolio is a purposeful aggregation of digital items - ideas, evidence, reflections, feedback etc. which 'presents' a selected audience with evidence of a person's learning and/or ability".*[14]

In addition to the difficulties of defining what an e-portfolio is, there is also considerable divergence in the purposes for which e-portfolios are used. Greenberg identifies three types addressing different purposes: Showcase (presentational), Structured (assessing achievement), Learning (reflective).[15] Ward & Grant have identified four potential uses to which e-portfolios can be put: presentation, assessment, supporting learning, personal / professional / career development.[16]

The e-portfolios described in this paper do not fit neatly into any one of these types. They are reflective rather than presentational in that they are student owned and focus on their needs rather than the perspective of the potential audience, and are designed to facilitate academic learning and PDP, by supporting reflection on the learning process and on skills and career development. However, they also include an element of assessment, representing 25% of the module assessment, within which presentational aspects are also assessed. This assessed element of the student e-portfolio will be referred to as the Web folio.[17]

There is extensive research literature on the use of portfolios and e-portfolios in the wider educational context, although only a limited amount of this relates to legal education. One such study, of an online PDP project at Exeter University law school, reported positive student responses but also identified IT problems as a potential obstacle to success.[18] Another similar project at Glamorgan University law school reported positive student perceptions but also identified lack of resourcing for the supporting personal tutor system as a potential pitfall. [19] Both studies suggested the importance of building the portfolios into the overall assessment structure as a motivational factor for student involvement. A more recent study of a project at Edge Hill University law school supports this latter conclusion while identifying some of the difficulties of assessing reflective writing. [20] The UoC project has been designed to minimise the impact of such obstacles through careful choice of the software, integration of personal tutoring within the teaching/delivery of the module, and the inclusion of an assessed element with clearly defined assessment criteria.

Given that it is widely acknowledged that reflection on the learning experience plays a key role in PDP, it seems appropriate to consider how e-portfolios can be utilised to support such activity. Drawing on Kolb's "reflective learning cycle", [21] it becomes clear that e-portfolios provide opportunities for dialogue, including formative feedback, between student and tutor that can be structured to support student reflection and enable further construction and development of knowledge and understanding. Research on e-portfolio implementation suggest that this is achievable. Grant et al have suggested that

“ *“the learner needs to be given opportunities both to reflect, and to record reflection in words. Other people, perhaps mentors or tutors, need to be able to give feedback on the learner's work and on the learner's reflections on that work”.* [22]

Maiden & Kinsey, commenting on a study of e-portfolio use at Wolverhampton Business School, concluded that e-portfolios have the

“ *“potential to create more independent learners capable of developing a stronger focus to their reflective practice”.* [23]

As Barrett has argued,

“ *“Many of the assessment portfolio solutions that have been put in place focus primarily on the administrators' needs for assessment data and around the positivist model. I am concerned that in the name of accountability, we are losing a powerful tool to support deep learning. I am concerned that that we are losing the "stories" in e-portfolios in favor of the skills checklists. Portfolios should support an environment of reflection and collaboration.”*[24]

In this project, learning tasks that involve reflection on specific learning activities and achievements were designed and integrated into the student e-portfolio. Students then selected elements which were presented, following a dialogue with and feedback from the tutor, for assessment through the Web folio.

One of the more contentious issues surrounding PDP and reflective learning is the concern over whether such work should be assessed and, if so, how it can be reliably assessed. Drawing on Baume's work,[25] the e-portfolio model developed in this project integrates valid learning tasks which are assessed by reference to the module learning outcomes using criteria that are clearly identified and explained to students prior to their undertaking the task. In selecting appropriate assessment criteria, the approach taken has been informed by the SOLO taxonomy developed by Biggs and Collis[26] as well as the more recent work of Moon. [27] Although different terminology is used by these authors, the common theme running through all the attempts to articulate a taxonomy for assessing reflective writing is the need to evaluate student progression from description through reflection and evaluation to critique and action planning. In devising appropriate criteria for assessing the Web folio, the current authors adopted a similar approach to Clark and Adamson[28] in that "student-friendly" language has been used wherever possible.

4. Implementation

Having identified the key policy factors and outlined the research literature that has informed this project, the following paragraphs will demonstrate how the project was implemented. Initially the software is described and the academic context explained before the discussion proceeds to address the key aspects of the project - recording achievement, employability, reflection and, briefly, assessment.

4.1 The software - Pebblepad

The e-portfolio system that was chosen for use in this project was PebblePad.[29] There are a large number of commercial and open source e-portfolio systems available.[30] PebblePad, which was developed at the University of Wolverhampton, was chosen for two main reasons: it has been built for use in the context of UK PDP and it was already being used by the UoC for staff undertaking their Post Graduate Certificates in Education with a view to expanding that use and supporting and hosting Pebblepad for all students in the near future.

The PebblePad e-Portfolio is described by its creators as

“*an evidence based web-publishing system..[which] enables you to record things you are doing or thinking about, create plans for work you are doing and present these records to other people via the web either as individual items or as a collection of items.*” [31]

PebblePad refer to anything created and stored within the system as an asset and there are twelve different types of asset available. These include for example; *Action Plans* aimed to allow presentation of future plans, *Achievements* allowing for presentation of attainments and *Proformas* which can be pre-designed by tutors. Evidence in common file formats such as Microsoft Word or PowerPoint can be uploaded and linked to existing assets. Assets within the e-portfolio can be drawn together with other material and presented as a Web folio, in the form of a linked series of web pages within the PebblePad software.

PebblePad has been designed to allow a certain amount of freedom on the part of the user regarding choice of asset, presentation and content. It provides a private, web-based, record, with portability potential for use in the course of further post-graduate studies and professional CPD. Parts or the entire e-portfolio can be exported or shared with other students, tutors or others such as potential employers.

Although this software is now supported by the UoC and easily accessible via a single portal at the time of the pilot this was not the case. A link to PebblePad was therefore created within the UoC Virtual Learning Environment, Blackboard. However it was not possible to synchronise student login details. This meant that

having already logged into the network and to Blackboard using one username and password, students were required to use different details to access PebblePad.

Students were initially provided with four hours[32] of "hands on" training, covering access issues, the use of assets, uploading / downloading of files and file sharing. Further training, later in the module, covered CV development, Progress Files and the creation of the assessed Web folio.

4.2 Academic Context

The first year of the LLB programme consisted of four 20 credit modules (Contract, Torts, Public law, Legal Institutions) and the 40 credit Legal Skills & Method (LSM) module. The LSM module, in addition to the academic content, included an Induction programme and a schedule of Skills workshops at the start of the year and a PDP programme (see *Workload table, below*), the latter constituting 50% of the assessed element and made up of a Moot presentation and the Web folio.

Ten PDP classroom sessions covered software training, career guidance sessions involving external speakers and practical sessions covering skills and careers development. Support was also provided in the form of individual Personal Academic Tutor (PAT) meetings at intervals throughout the year. These meetings supplemented online dialogue via the e-portfolio software and focussed on feedback and reflection on both skills and academic development as well as on action planning for the future.

The extent to which the PDP programme was embedded within the curriculum is demonstrated not merely by its inclusion within the module but more importantly by the regular links made with the content of other modules,[33] and the regular reflection and action planning on academic achievement in the substantive law modules, as identified in the Progress Files (see *below*) that students developed and maintained within their e-portfolios.

Thus the underlying and interrelated themes of transferable and academic skills development, employability issues and reflective learning were addressed throughout the year. At the same time, students maintained a record of achievement (Progress File) and ultimately produced their assessed Web folio which combined evidence of, and reflection on, their academic learning and achievement as well as demonstrating IT and presentational skills. This process was supported throughout by the e-portfolio, which operated both as an archive of evidence and as a communications tool facilitating student-tutor dialogue.

The Table below provides further detail of the classroom sessions and the following sections will elaborate in more detail on the key aspects and underlying themes of the E-Portfolio Project, as identified above.

4.3 Workload

Teaching week	PDP Sessions
3	E-portfolio training & development
5	E-portfolio training & development
6	Court Visit; PAT meeting (Skills reflection)
8	Introduction to pro-bono work experience opportunities with Carlisle Law Centre

10	Seminar by local trainee solicitors - career planning
11	PAT meeting (Court Visit reflection)
13	Mooting guidance & preparation
15	Progress Files
17	Careers Talk and CV writing guidance
18	PAT meeting (Progress Files feedback and reflection)
20	Mooting assessment
22	"Hands on" CV writing
23	PAT meeting (CV feedback and reflection) Discussion of previously shared CV with PAT
24	Web folios
25	PAT meeting (Web folio feedback and development)

4.4 Recording Achievement - Progress Files

As has previously been indicated, students were required to compile and maintain a Progress File as evidence of their skills development and academic achievements throughout the year. This was implemented by importing a proforma, customised by the tutors, into the e-portfolio. to provide an evidence base for further reflection and action planning. The e-portfolio communications tools were utilised to facilitate the latter process, supported by the regular PAT meetings.

4.5 Employability

Employability has been defined as

“ *a set of achievements - skills, understandings and personal attributes - that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy.*’ [34]

One of the main objectives of the PDP programme was to enhance student employability. But as explained by Yorke

“ *It is a mistake to assume that provision of experience, whether within higher education or without, is a sufficient condition for enhanced employability....[e]mployability derives from the ways in which the student learns from his or her experiences.*’ [35]

Within the PDP framework therefore, students were given opportunities to gain experience both within and outside the curriculum, to reflect on that experience and to formulate plans for future action.

The experience of engaging with learning activities, from within both the LSM and other modules, that were designed to promote or assess the acquisition of transferable skills such as research and written/oral communication were the subject of guided reflection, supported through the e-portfolio.

Specifically for example, students were encouraged to reflect on their preparation for, and presentation of, a practice moot as well as on the feedback received via PebblePad. Students were invited to identify strengths and weaknesses and to draft 'action plans' to help them improve their performance in the final assessed moot. Again the e-portfolio provided the communications tool for this process.

Further extra-curricular opportunities included the possibility of regular pro bono work with the local Community Law Centre, a seminar lead by trainee and newly qualified solicitors concerning choice of and application for Legal Practice Courses, training contracts and work experience placements as well as the production of a CV. Students were also invited to reflect on their work experience and received feedback from tutors on CV writing. In these instances the e-portfolio operated both as a document archive as well as a communications tool.

4.6 Reflection

As has been indicated, students were encouraged to record their reflections on various aspects of their learning experience throughout the year. The e-portfolio provided a vehicle for this as well as supporting further reflective dialogue with their PATs, within a structured framework. There is anecdotal evidence of further dialogue between student peers but no empirical data has been gathered on this. However, planned developments for the second year of the LLB (see below) may provide a rich source of further research on the nature and extent of reflective peer dialogue.

Most of the curricular and extra-curricular opportunities for reflection have already been identified above but it is useful to summarise how they operated in practice in more detail.

The first opportunity for students to engage in reflection was provided by a four day Induction programme prior to the start of formal teaching. Students engaged in a range of activities designed to prepare them for HE level studies generally, to introduce them to legal materials and argument, to stimulate further interest in the subject, to facilitate peer networking, to promote a sense of group identity and to enable students to meet and engage with tutors. A week later, as an introductory exercise in the use of the e-portfolio, students were encouraged to reflect on their experience of the Induction programme and "share" a brief summary with their PAT.

The Court Visit provided a more substantial opportunity for reflection. In this case students were asked to record their observations of the court in action and to reflect on the learning experience. They were encouraged to draw on academic material from a related module and to relate the experience to their own career aspirations.

Two assessed Skills Test assignments, a library research and a referencing test, provided the first opportunity for reflection on skills development. A more demanding learning activity, the Mooting assignment, provided a further opportunity to reflect both on transferable skills as well as academic skills. In both these instances, students were asked to reflect on both the process and the outcome of the assignments.

The Progress File was used primarily as a tool for recording achievement (*see above*) but also provided an evidence base for further reflection on academic learning. Again students were asked to reflect on both process and outcomes as the basis of a dialogue with their PAT using the e-portfolio communications tools.

Finally, students were asked to reflect on various aspects of career development. Most students had obtained some work experience either in legal practice, the Law Centre, the CPS or other voluntary legal work. In addition, students were encouraged to reflect on their career aspirations and to develop action plans, including ongoing revision of their CVs. These reflections on career development issues then formed the basis of further dialogue with their PATs through the e-portfolio.

Thus it can be seen that students were engaged in reflection on a range of activities and learning experiences throughout the year. Some of these reflections were then included within their assessed Web folios which were submitted at the end of the year. The following section provides further detail of the Web folio.

4.7 Assessed Web folio

It should be emphasised that the assessed Web folio did not represent the entirety of a student's e-portfolio. As has been indicated above, students utilised the PebblePad asset (a web folio) as the medium for the presentation of a selection of their work for assessment. This assessed Web folio consisted of a series of linked web pages, each designed to demonstrate one or more of the elements identified for assessment. The main feature of all these elements was that they contained a reflective commentary on learning activities engaged in during the year and, where appropriate, included links to other assets within the e-portfolio as supporting evidence.

The assessment criteria were explained in detail to students together with detailed guidelines on what elements should be included. The exact presentational style was left as a matter of student choice although clarity of presentation was included within the assessment criteria. The main criteria for assessment were evidence of reflection on learning activities (academic and skills development) and on the feedback received in respect of related coursework, the provision of supporting evidence such as the Progress File and CV as well as links to feedback comments and other documents as appropriate, evidence of action planning based on the feedback and reflection.

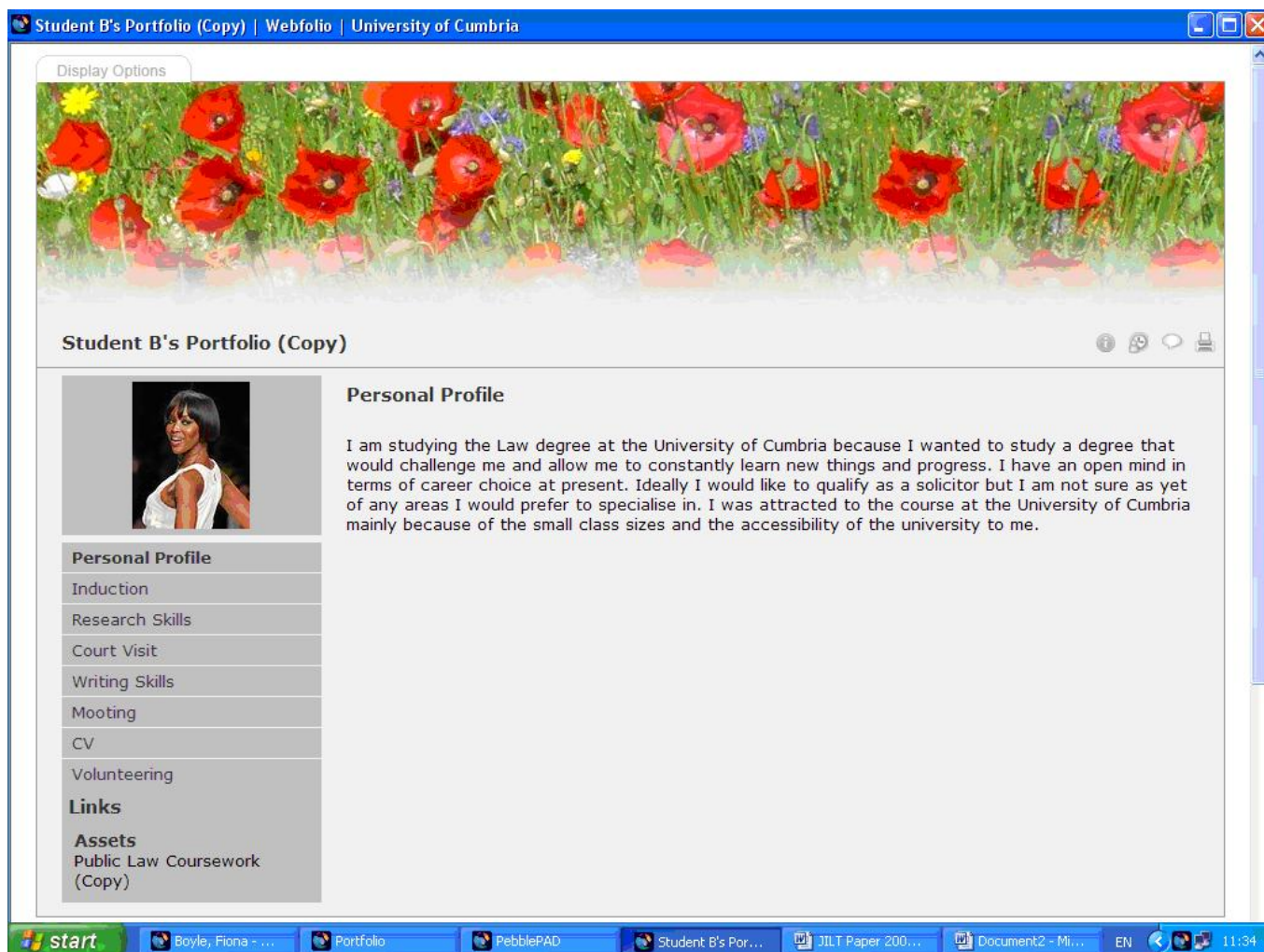


Illustration 1: Example Student Web folio (1)

4.8 Year Two

It has been stated that

“*The entire law school experience should help students become expert in reflecting on their learning process, identifying the causes of both successes and failures, and using that knowledge to plan future efforts to learn with a goal of continuous improvement.*’ [36]

It is important therefore that in year two, students are encouraged to continue their reflection using the e-portfolios introduced in their first year. Although more PDP activity is likely to take place in year two,[37] it is also important to acknowledge the need to encourage increasing autonomy on the part of students. This has resulted in fewer hours of scheduled contact. Second year students will be asked to begin to review the content of their Web folios during their induction. Following which there are five timetabled sessions spread through the academic year in which they will: update their Web folios and reflect on their first year (in particular their experiences of the exams); update their CV's and consider their future career, work experience or further study plans; reflect on assessed work and add content relevant to key transferable skills.[38]

5. Evaluation of PebblePad E-portfolios

Both quantitative and qualitative feedback from the UoC student pilot was obtained via a paper questionnaire (in March 2009) and a later focus group session (in May 2009).[39] In addition, student performance and the reflective evaluation of the tutors have provided information on which to evaluate the project.

The feedback from students overall was very positive. Most 'strongly agreed' or 'agreed' that the e-portfolio facilitated reflection on both skills development and academic progress (92%). Most felt it provided a useful record for learning about oneself (83%) and most 'strongly agreed' or 'agreed' that it provided a useful record of achievements (83%).

A number of comments also reflected the students' positive response:

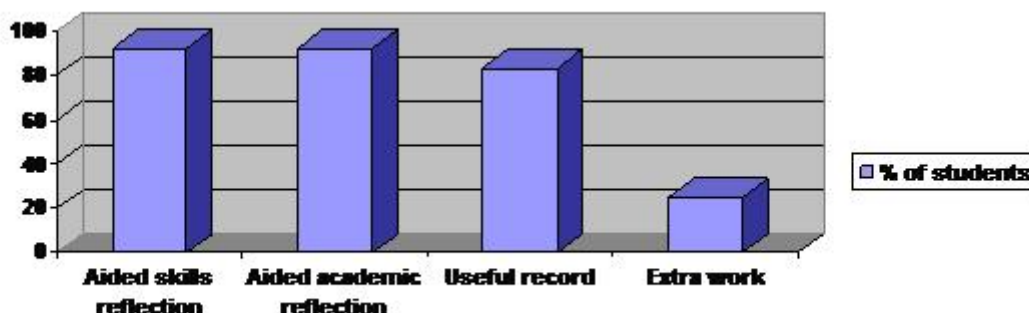
“ *"A useful record of strengths."*

"It was good to see how far you've come."

"I found the sessions fun"

"I honestly don't think there is a lot of room for improvement."

Some less positive feedback related mainly to the problems associated with using unfamiliar software and partly to the fact that production of the e-portfolio was perceived as extra work (see below for further comment).



Under the UKCLE project[40] the key themes identified were: employability, IT issues, reflection, regular entries, structure, training and workload. These themes will be referred to below in the context of the findings from the UoC pilot.

5.1 Employability

One of the prime objectives of PDP is to support student employability by allowing students to use their awareness of themselves and their skills in their career planning and job applications.[41] This theme is commonly seen as more relevant by students on vocational courses or on work placement.[42] Only one question on the questionnaire referred to this issue asking whether the e-portfolio would be useful in the future when applying for jobs. In answer to this question 58% of students thought that it would, and when asked for any further comments one student added:

“ *"Helpful for Career development / CV"*

Despite the fact that first year students may be less aware of the significance of reflective portfolios for employability it is nevertheless useful for students to become familiar with the concept of reflective learning in preparation for their future careers. 'The signature pedagogies of professionals are designed to transform knowledge attained into knowledge in use, and to create the basis for new kinds of understanding that can only be realised experientially and reflectively. What this means for legal educators is that we need to get our

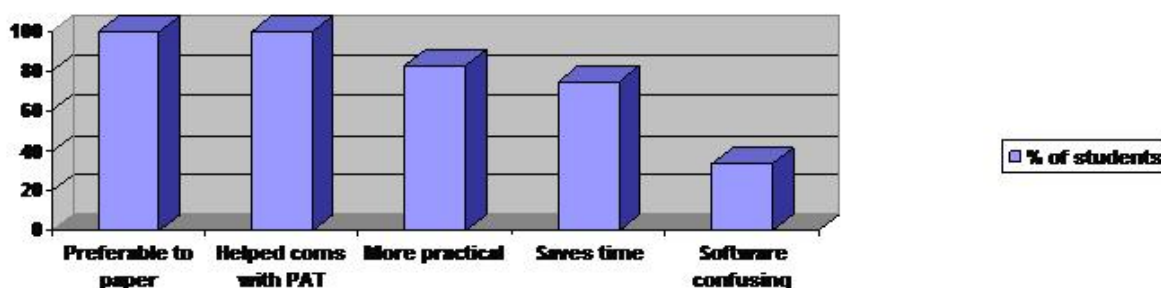
students to think like lawyers. We need to build up their meta-cognitive skills to develop an understanding of experiences allowing the process of reflection. This will enable them to become more intuitive, building identity, character and values.'[43]

Of course not all students will appreciate any significance in the compilation of a portfolio. One of the most negative comments on the questionnaire was from a student who said:

“ *"I signed up for a degree not an NVQ and I resent the fact I am being made to participate in a pointless exercise."*

5.2 IT issues

Overview of student responses:



None of the students in the pilot had used an e-portfolio before.[44] It is difficult to access the impact of this. It may have been an advantage as no one was biased by a previously negative experience. Its main disadvantage would seem to be the lack of familiarity with the concept and the technical skills needed to produce an e-portfolio. This is borne out by comments from the focus group indicating that students found using the unfamiliar software challenging.

The diversity of technical skills among a student cohort can present problems. Others have argued that electronic portfolio systems need to find a balance between highly structured templates, which scaffold the learning of the portfolio process and are useful for novice portfolio users, and open-ended or self-directed portfolio tools, which foster learners' knowledge of themselves and suit more advanced users. [45]

The reasons for choosing PebblePad have been outlined above. Other research clearly shows that the software chosen can constrain or enhance the process.[46] PebblePad had many advantages but in opting for it as the platform for our e-portfolios we were aware that students would need to familiarise themselves with completely new software. This was challenging for many students. When asked about aspects of producing the e-portfolio that they did not enjoy, a number of students raised technical issues. Many of these might be mitigated through more intensive initial training. 25% of students referred to the fact that they found the software 'confusing'. For example one student in response to a question about what they did not enjoy, said:

“ *"Adding links and extra pieces to entries, not being a computer wiz I found it sometimes confusing."*

This issue is also important for assessment, as technical knowledge required to create a portfolio may also unfairly disadvantage some students. [47]

It is interesting that only one student felt any unease regarding the placing of personal data on an external server. This may be a reflection of the fact that 85% were under 25 and more likely to have used other web based systems such as Facebook to store personal data. Alternatively it may simply reflect greater appreciation of the risks to personal data privacy by that student.

When asked what would have made the process of compiling the e-portfolio easier students raising technical issues commented particularly on the number of assets available within PebblePad.

“ *"You've got about fifteen choices of what to create and you think ...so what do you create? So you don't know whether you're creating the right one or not."*

Students also commented on the fact that they would have liked the software to be more like other software they are already familiar with e.g. Microsoft word or Facebook.

One stated:

“ *"It's just little things really. Like you'll go on and you can view or edit and I always keep clicking view and then realise I can't edit and I don't see the point in having view and edit because you can view when you're editing."*

A number of comments were very general but also reflect the lack of familiarity e.g.

"If there was a better user interface."

"If the concept was simpler."

"If the structure was more fluid."

The main technical issue arising from the feedback is clearly the fact that a significant number of students found the software confusing. This might be addressed in part by adapting the training given. More direction concerning which assets to use for specific tasks might be helpful at least in the first year of use. More specific feedback on this issue (obtained through focus groups) might also be passed on to the software provider.

5.3 Structure

Generally, the students seemed to appreciate the electronic nature of the portfolio. None of the students would have preferred a paper portfolio. Students therefore preferred the e-portfolio model, at least as compared to the perceived differences that a paper portfolio would entail. Paper portfolios are obviously less easy to transport particularly as they grow in size. The fact that e-portfolios are easy to store, maintain, edit and update probably also means that they are more likely to be constantly revised.^[48] The main reasons for preferring e-portfolios highlighted by students were ease of access (33%) and convenience for amending/updating (50%). These give e-portfolios a major advantage over paper portfolios. Students could work on their portfolios and tutors could review and assess them from many different sites.^[49]

Other comments reflected the fact that an e-portfolio is seen as: less likely to be lost or damaged, more environmentally friendly, more flexible and more practical as files can be attached and all information is in one place.

Students commented:

“ *"I find computers more enjoyable and easier to use."*

"I enjoyed having free choice of how to design the portfolio."

However it should be noted that one student reacted negatively to the whole concept of PDP and seems therefore to have rejected the prospect of a paper portfolio as equally bad rather than worse than an e-portfolio. This student commented:

“ *"I am not interested in it and find it a pointless, time-consuming exercise. I am not very good with computers and I have no interest in 'reflection' or self analysis."*

Students seemed to be largely content with the organisation of their Webfolios. As described above students were given a list of mandatory headings and content reflecting the tasks they had been asked to complete but were also given some choice regarding additional headings and presentation.

Students added a wide range of evidence to their e-portfolios. This included seminars, coursework, PAT questionnaires, reflections, identification of strengths and weaknesses, marks, feedback, group presentation materials, CVs and work experience details.

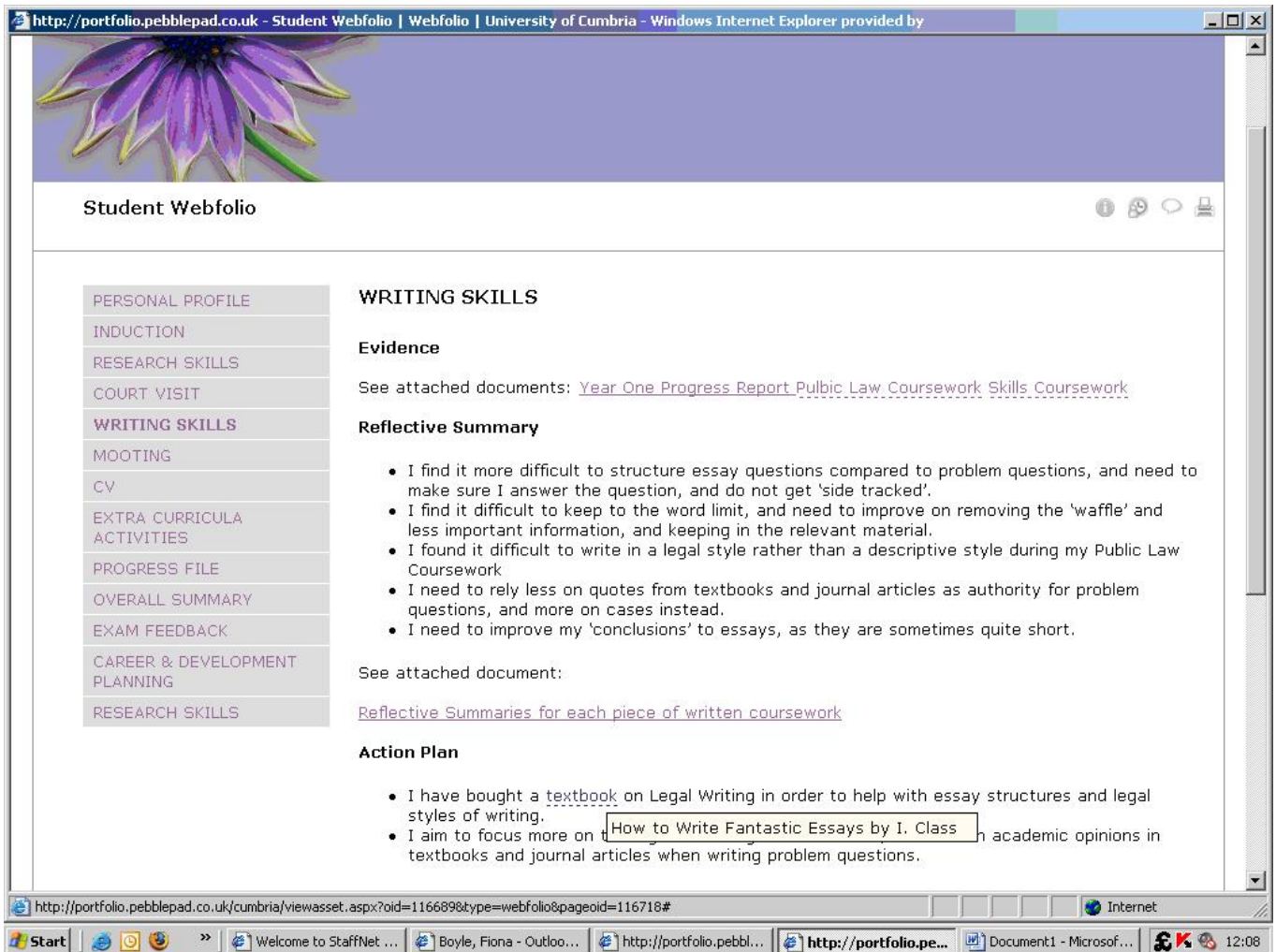


Illustration 2: Example Student Web folio (2)

Other positive aspects that were highlighted by students were the fact that the e-portfolio:

- Could be adapted and personalised (25%),
- Could be used to help remember recorded events (8%),
- Provided an opportunity to express your feelings (8%),
- Was enjoyable to set up and learn how to use (8%),
- Provided the ability to share comments with tutors (8%),
- Allowed for the creation of a catalogue of work (8%),
- Had a multi-media dimension which made it more interesting (17%).

Students commented:

“ *"You can basically attach anything you want such as photo's etc. Makes it more interesting than just written documents."*

"I do like the idea that you can add stuff in and that doesn't necessarily form part of your portfolio. So say you wanted to remember something specific you'd put it on then and because it's your personal portfolio it doesn't necessarily go further because I know it's marked at the end of this year. You can add anything to it which is good. I like that."

5.4 Training

When asked how easy Pebblepad was to use and given a range of options from very easy, through easy, neither easy nor hard, hard to very hard, 67% of students said it was neither easy nor hard, 25% said it was easy and 8% said it was very easy. This is fairly positive, especially as this was the first time all students had used this software.

At the beginning of the year students were given two hands-on workshops of two hours duration to introduce them to using Pebblepad. They were also given guidance materials and introduced to the inbuilt Help facility. In relation to the amount of training received in using the software when given three options: too much, the right amount or not enough, 50% of students felt they had received the right amount of training though one added that they would have liked to be trained in and then used Pebblepad for group work. However 50% felt that more training would have been useful.

Students were also asked what would have made the process of compiling their e-portfolio easier. 25% of students expressed a desire for more guidance and training. When asked for suggestions to improve the experience for subsequent students comments such as those below, which also express a desire for more training, were common:

“ *"Try to provide better understanding of the basic navigation skills."*

"More guidance on what to write / encouragement to use it more."

Students were also given some supervised class time to work on their portfolios. There were two specific sessions of 2-3 hours when tutors were available for help though one of these sessions took place after completion of the questionnaire. The focus group discussion and a number of other questionnaire comments support the conclusion that it would be useful to increase these sessions where students work on a task with help from each other and the tutors, as opposed to working in isolation. In the focus group students spent some time discussing their desire to complete portfolio tasks in a room together with a tutor available for support.

One student said:

“ *"I know the discussion forum was good, but if it was done in a lesson to share between people you'd still be in a discussion forum and you'd still have the opportunity to keep everybody else's views as well but you'd sort of be doing it together to see how it works and stuff."*

Research shows that 'buy-in' to the portfolio concept can be facilitated for students by showing them examples of past electronic portfolios and demonstrating their effectiveness in making learning gains.[50] Similarly a lack of examples of past portfolios can lead to student confusion and anxiety about the scope, nature and value of the task.[51]

As this was the first cohort of students to produce e-portfolios no examples were available. However in following years showing examples of previous student work and engaging previous cohorts in mentoring students producing their e-portfolios for the first time might prove of benefit and is planned.

Although staff were aware of the fact that students would need a lot of guidance and support throughout the process [52] it seems clear from the student responses that many would have welcomed further help. This has implications for staff resources and may need some creativity when dealing with larger student groups.

5.5 Regular Entries

Although students were asked to share some aspects of their e-portfolio preparatory work during PAT meetings during the year, the only formal deadline was the submission of their completed Web folio. Predictably, it seems that many students left a larger proportion of their work than is ideal to be done immediately before that deadline.

When asked how many times they had used Pebblepad, 75% stated that they used it less than once a week and 25% had used it once a week. Comments show that, unsurprisingly, assessment deadlines were the main motivating factor but that by the end of the year students did recognise the importance and value in making regular entries.

Students said:

“ *"I think due to the fact that we've got no deadlines for anything we've done so I lacked a lot of motivation towards it because you've got deadlines for everything you do. It's the only thing you haven't and you just think oh I'll do it next week."*

"I know a couple of the things I've written, by the time I've got round to them its been in a few weeks where really it would have been better done at the time but you don't prioritise it because it doesn't need to be."

When asked what advice they would give to another student starting an e-portfolio nearly all students (67%) gave a very similar response. The main advice was to start to use it as soon as possible and then update it regularly. Typical comments were:

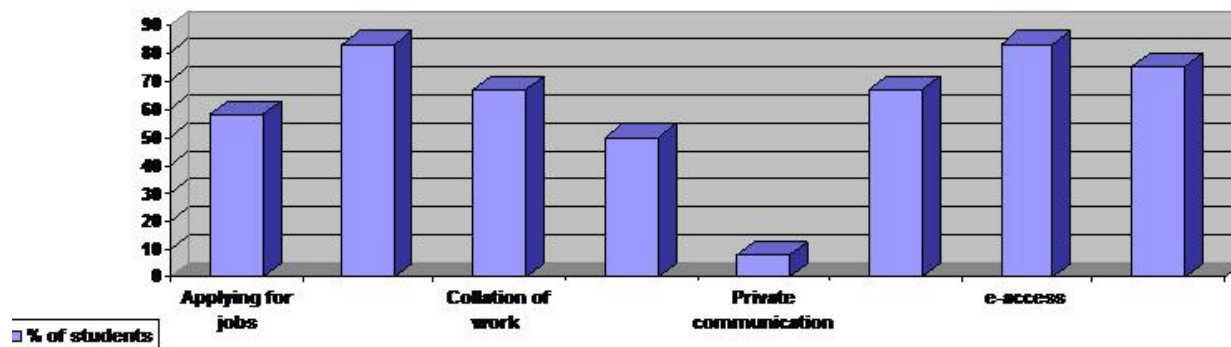
“ *"Always update it. When you get a mark back or have done some coursework upload it onto your portfolio so everything you have done is included at the end of the year. "*

"Start to use Pebblepad as soon as you can and update your portfolio regularly."

One student was not typical and merely advised *"..don't expect to enjoy it."*

5.6 Reflection

When asked how they might find their e-portfolios useful in the future students identified the following:



Reflection scores highly here with 83% of students stating that their portfolios would be useful for future reflection. This is reflected in comments such as those below:

“*"I enjoyed the reflection aspect. It helped my confidence a lot to be able to see improvements over time. I also liked the fact that you could share comments with lecturers, this was useful to let them know how you were feeling about their feedback and the course in general."*

"Can be used as a pick me up for times when I was feeling a little useless."

In addition, when asked what they most enjoyed about the e-portfolio, the aspect most commonly cited by students was the reflection on progress that the e-portfolio allowed (58%). Through the process of portfolio construction, students gain a broader sense of what they are learning [53] and this seemed to enhance their confidence. For those compiling them, electronic portfolios foster a sense of pride in their work, a sense of personal accomplishment, and a feeling of satisfaction. [54]

Students commented:

“*"..say you've done two essays. They're completely different...but you'll see on the first essay where you needed to improve and then once you've finished the second one you'll see that you've improved because there wasn't as many comments say 'you need to improve on this' now move onto this so you can track your own progress, all in one."*

"You know, seeing that you've got through all that and you're actually improving. It makes you feel you can go on."

Answers to questions relating to the reflective element of the portfolio and the link with Personal Academic Tutor guidance were recorded as follows:

The production of my e-portfolio:	Strongly agree	Agree	Disagree	Strongly disagree
Helped me to reflect on my skills development during the year	50%	42%	0%	8%
Helped me to reflect on my academic progress during the year	33%	58%	0%	8%

Provided a useful record of my achievements during the year	58%	25%	8%	8%
Assisted communications with my PAT during the year	50%	50%	0%	0%
Was well supported by my meetings with my PAT	33%	42%	25%	0%

Responses were therefore largely positive in relation to the enhancement of students' ability to reflect on their work and achievements. It is gratifying that most students agreed that the e-portfolio also aided communication with their PAT. Using e-portfolios students can receive feedback quickly and regularly which contributes to the 'feedback loop' integral to formative assessment.[55]

However it is of some concern that 25% of students did not feel well supported. It may be that there is inconsistency in the way that individual tutors supported the production of the e-portfolio. All tutors were very familiar with the Pebblepad software which indicates that this may be more likely to be due to either dissatisfaction on the part of the students with the support given by their tutor generally, or to the e-portfolio in particular, rather than to technical or training issues. It has been suggested[56] that discussions between students and their teachers lie at the core of the portfolio methodology. This requires academic staff to be as committed to and involved in the portfolio process as their students[57] which in turn means that guidance, support and training for academic staff is a vital feature of successful implementation.

5.7 Workload

A minority of students were concerned about the work and time involved in compiling their portfolio. These students (25%) seemed to hold the view that this work was additional rather than just part of another module. There may be something that staff can do to minimise this perception in future.

Most students however seemed to agree that the workload was not notably heavy. Comments from the focus group endorsed this:

“ *"I didn't think it was hard or it takes masses of time or anything"*

"I didn't think it was a lot because it was just your thoughts it's not like you have to go to a reference book and put citations in is it?"

As explained above, students were given various e-portfolio tasks to complete throughout the year. 67% of students felt they were given the right number of tasks. 17% felt there were not enough and 17% felt there were too many. The number of tasks is therefore planned to remain unaltered for the coming academic year. It is worth noting however that some of the focus group discussion reflected a desire for students to be encouraged to add more personal reflections on various aspects of the course such as guest speakers to give them regular practice in using the software.

Students also generally felt that the tasks were explained clearly. 17% felt the explanation was very clear, 58% felt it was clear, 8% felt it was neither clear nor unclear, 8% felt it was unclear and 8% felt it was very unclear. 58% of students identified their reflection on coursework feedback and/or their progress report as the most useful task.

5.8 Student achievement

In terms of measuring the value of the e-portfolio in supporting academic learning and achievement, the size of the cohort was unfortunately too small to be of statistical significance. However, the positive student response (above) combined with the results for both the module and the Web folio itself suggest that it has been successful. Eleven of the twelve students registered for the LSM module successfully passed, with two first class, seven upper second and two lower second class marks being awarded. The one failing student did not submit the Webfolio [58] and withdrew from the LLB programme at the end of the year. All the submitted Webfolios passed with three first class, five upper second, one lower second and two third class marks being awarded. Given the fact that all twelve students were from "non-traditional" backgrounds[59] and set against the average retention rates for the institution and the faculty, this is a remarkably high pass rate. Additionally, on the basis of anecdotal evidence, a high proportion of these students have already obtained work placements independently.

6. Conclusions

In summary, this paper has sought to outline the HE policy background and pedagogic rationale which underpins the e-portfolio project under discussion and has described in some detail how the use of student e-portfolios has been deployed to support and underpin a PDP programme that was embedded within the first year Legal Skills and Method module. Finally, an analysis of the evaluative data was undertaken, based on the results of student feedback questionnaires and focus group discussions. It is intended to highlight the main conclusions that the authors have drawn from the project, identifying both strengths and weaknesses, and putting forward some suggestions for future action and development.

The first point that should be made is that the overall tone of the student feedback has been very positive. Secondly, the overwhelming majority of students have successfully achieved the learning outcomes for the module.[60] In addition, tutor reflection on the experience of implementing the project is positive, despite the challenges that were faced and the additional work that was generated from time to time. That having been said, there are aspects that clearly need further refinement and development in the future.

The positive aspect most strongly identified by the student evaluations is that the e-portfolios played a significant role in supporting and enhancing the process of reflection on their learning throughout the year. Additionally, students were very positive about the way in which the e-portfolios supported the development of their employability skills by providing a vehicle for reflection on their work experience opportunities and CV writing. The third aspect that students expressed satisfaction with was the way in which the e-portfolios provided a vehicle for recording their academic achievements and skills development. Given that all three aspects form the core objectives of the project, it can be concluded that the project has been broadly successful.

Those aspects which were identified as being problematic were mainly related to unfamiliarity with and/or dissatisfaction with elements of the PebblePad software. In retrospect, the tutors acknowledge that more detailed guidance on the use of the different "assets" in PebblePad could have been provided and this will be remedied in future years. It will be interesting to observe if student use of the software becomes more sophisticated in their second year of study as they become more familiar with PebblePad. A further issue identified in the student evaluation was the extent to which a more structured diet of tasks for reflection could or should have been provided. This aspect presents a dilemma for tutors in that the long term objective is to develop more independent and autonomous learners and it is felt that to present an excessively detailed

structure would undermine that objective. It is however intended to respond to this demand by providing some additional guidance and suggestions on specific activities for reflection. A third issue raised by a minority of students relates to the support received from their PATs and reveals, unsurprisingly, the fact that such support can be variable. This is an issue which needs to be addressed for the future and which will entail further staff development activity. Finally, a minority of students felt that the workload was burdensome but this view is not supported by the majority and is not borne out when placed in the context of the module itself and the first year academic programme overall.

To conclude, the authors would argue that the project has demonstrated the value of e-portfolios as a tool for supporting and enhancing the student learning experience in three ways. Firstly by enabling students to record and organise their academic achievements to provide a platform for reflection. Secondly, by encouraging an ongoing process of reflection supported by tutor feedback and dialogue. Thirdly, by encouraging and supporting the development of student employability skills in a practical and meaningful context. At the same time, the authors recognise that further attention needs to be paid to providing more detailed guidance on using the software, additional activities as a focus for reflection and further staff development in relation to online personal tutoring skills.

Endnotes

[1] PebblePAD is a proprietary web-based e-portfolio system which is used in the UK Higher Education sector and has been involved in a number of JISC funded e-portfolio projects. See <http://www.pebblepad.co.uk/> (last accessed 06/10/09).

[2] CDLT provides a focal point for Learning, Teaching and Assessment issues through the implementation of the University's Learning and Teaching Strategy. It provides funds for development and research projects related to learning, teaching, assessment and the use of advanced and emerging technologies in educational contexts.

[3] Joint Information Systems Committee See <http://www.jisc.ac.uk/> (last accessed 06/10/09).

[4] Flourish was a two year project funded under the JISC Users and Innovation Capital Programme which started in March 2007. PebblePad e-portfolios were used by academic and research staff at the University of Cumbria to record learning and achievement for reflection and professional purposes.

[5] See <http://www.ukcle.ac.uk/index.html> (last accessed 06/10/09).

[6] An exploration of the use of e-portfolios in legal education, developing guidelines and examples of good practice using case studies. See <http://www.ukcle.ac.uk/research/projects/eportfolios.html> (last accessed 06/10/09).

[7] Dearing (1997) National Committee of Enquiry, Recommendation 20, at <https://bei.leeds.ac.uk/Partners/NCIHE/> (last accessed 28/08/09).

[8] Joint UUK-SCOP-QAA Progress File Policy statement on a progress file for HE (2000), at <http://www.qaa.ac.uk/academicinfrastructure/progressFiles/archive/policystatement/default.asp#pdp> (last accessed 28/08/09).

[9] Burgess Report (2007), at http://www.universitiesuk.ac.uk/Publications/Documents/Burgess_final.pdf (last accessed 28/08/09).

[10] Ward, R. (2007) 'The opportunities and challenges of Burgess...' in (PDP-UK Newsletter Issue 12 December 2007) at: <http://www.recordingachievement.org/pdpuk/newsletter/Issue12.pdf> (last accessed 28/08/09).

[11] Bloxham, S.M. and Cerevkova, A. (2007) 'Reflective Learning, Skills Development and Careers Management online - An Evaluation of a 1st Year law module', Journal of Information, Law & Technology (JILT) 2007 (1).

- [12] See for example, T Madden, T. (2007), '*Supporting Student E-portfolios*', Higher Education Academy.
- [13] Joint Information Systems Committee (JISC) 'Effective Practice with e-Portfolios'
- [14] Sutherland, S. and Powell, A. (9 July 2007), [CETIS Portfolio SIG mailing list discussions](http://www.jiscmail.ac.uk/archives/cetis-portfolio.html) [www.jiscmail.ac.uk/archives/cetis-portfolio.html] as quoted in JISC e-portfolios - an overview <http://www.jisc.ac.uk/eportfolio>.
- [15] Greenberg, G. (2004) '*The digital convergence: Extending the portfolio model*', Educause Review, 39(4), 28-37.
- [16] Ward, R. and Grant, S. (2007) '*An introductory paper- What is an e-portfolio?*', Centre for Recording Achievement. At <http://www.recordingachievement.org/eportfolios/keydocs.asp> (last accessed 28/08/09).
- [17] This is consistent with the specific PebblePad asset that was used to present it.
- [18] Prince, S. (2001) '*PESCA: introducing personal development planning at Exeter*', (LTSN Generic Centre, Case Study No. 4), at <http://www.ukcle.ac.uk/resources/pdp/exeter.html> (last accessed 28/08/09).
- [19] East, R. (2006) '*A progress report on progress files: The experience of one higher education institution*'. Active Learning in Higher Education Vol 6(2): 160-171.
- [20] Bloxham, S.M. and Cerevkova, A. (2007) '*Reflective Learning, Skills Development and Careers Management online - An Evaluation of a 1st Year law module*', Journal of Information, Law & Technology (JILT) 2007 (1).
- [21] Kolb, D. (1984) '*Experiential Learning as the Science of Learning and Development*' Prentice Hall.
- [22] Grant, S., Strivens, J. and Marshall, A. (2004) '*E-portfolio systems supporting learning and Personal Development Planning*'. Presented at the ePortfolio 2004 conference, La Rochelle, 28-29 October. At <http://www.simongrant.org/pubs/ep2004/index.html> (last accessed 31/8/09).
- [23] Maiden, B. & Kinsey, S (2006) '*Encouraging Reflective practice through the introduction of e-portfolios: a comparison of the postgraduate and undergraduate experience*.' University of Wolverhampton. At <http://wlv.openrepository.com/wlv/bitstream/2436/7593/1/Encouraging%20Relective%20Practice.pdf> (last accessed 31/8/09) This study also involved the use of PebblePad software.
- [24] Barrett, H. (2005) '*Researching Electronic Portfolios and Learner Engagement*' The REFLECT Initiative. At <http://electronicportfolios.com/reflect/whitepaper.pdf> (last accessed 31/8/09).
- [25] Baume, D. (2002) '*Portfolios, Learning and assessment*' Centre for Recording Achievement. At http://www.recordingachievement.org/downloads/Assess_Portfolios.pdf (last accessed 31/8/09).
- [26] Biggs, J. and Collis, K. (1982) '*Evaluating the Quality of Learning: the SOLO taxonomy*.' Academic Press.
- [27] Moon, J. (2001) '*PDP Working Paper 4 - Reflection in Higher Education Learning*.' LTSN Generic Centre. At http://www.tcd.ie/Nursing_Midwifery/assets/docs/Teach%20Learn/PDP%20Working%20Paper%204%20Moon.pc (last accessed 31/8/09).
- [28] Clark, W. and Adamson, J. (2009) '*Assessment of an ePortfolio: developing a taxonomy to guide the grading and feedback for personal development planning*.' Practitioner Research in Higher Education Vol 3(1), p43-91, at p48.
- [29] <http://www.pebblelearning.co.uk/> (last accessed 31/8/09).
- [30] See Strivens J. (2007) '*A survey of e-pdp and e-portfolio practice in UK Higher Education*' http://www.heacademy.ac.uk/resources/detail/id631_survey_of_epdp_and_eportfolio_practice . (last accessed 31/8/09) Note also that Madden T (2007) Supporting Student E-portfolios, Higher Education Academy Physical

Sciences

Centre

http://www.heacademy.ac.uk/physsci/resources/detail/publications/practiceguides/supporting_student_e_portfolio gives examples at Appendix II (last accessed 31/8/09).

[31] PebblePad at <http://www.pebblepad.co.uk/> (last accessed 31/8/09).

[32] This was split into two, two hour sessions over a two week period. The sessions were held in a room with a large screen and a laptop for each student with a ratio of one trainer to three students.

[33] E.g. Prior to the court visit, students had over aspects of the criminal and civil justice systems in the Legal Institutions module and were prompted to reflect on the experience against that academic background. The same module also covered the structure of the legal professions which was linked to the careers sessions.

[34] Yorke M (2006) *'Employability in higher education: what it is - what it is not'*, The Higher Education Academy Learning and Employability Series http://www.heacademy.ac.uk/assets/York/documents/ourwork/tla/employability/id116_employability_in_higher_education.pdf (last accessed 06/10/09).

[35] *Op. cit.*, note no. 34.

[36] Stucky R and Others (2007) *'Best Practices for Legal Education: A vision and a road Map'*, Clinical Legal Education Association.

[37] Cottrell S (2003) *'Skills for Success - the personal development planning handbook'*, Palgrave Macmillan who states at p xi that 'the bulk of PDP activity will take place at level 2'.

[38] Communication, problem-solving, teamwork, autonomy and personal skills, information technology, numeracy and intellectual skills. As defined by the Law Discipline Network Report (1998) See <http://www.ukcle.ac.uk/resources/ldn/index.html> (last accessed 10/09/09).

[39] The student cohort was small, comprising twelve students. Twelve completed the questionnaire (100% response rate) and four attended the focus group session (33% response rate).

[40] *Op. cit.*, note no. 6.

[41] Cottrell S (2003) *'Skills for Success - the personal development planning handbook'*, Palgrave Macmillan p1-2.

[42] UKCLE Evaluating e-portfolios in law 2007-08 <http://www.ukcle.ac.uk/research/projects/eportfolios3.html> (last accessed 31/8/09).

[43] McKellar P (2007) *'E-portfolios in the professions: experiences from law, medicine and veterinary medicine'* paper presented at LILAC 2007 <http://www.ukcle.ac.uk/newsevents/lilac/2007/papers/eportfolios.html> (last accessed 31/8/09).

[44] At least one student had used a paper based reflective portfolio in a work context.

[45] Barrett, H., & Knezek, D. (2003, April 22). *'E-portfolios: Issues in assessment, accountability and pre-service teacher preparation'*. Paper presented at the American Educational Research Association Conference, Chicago, IL.

[46] MacDonald, L., Liu, P., Lowell, K., Tsai, H., & Lohr, L. (2004). *'Graduate student perspectives on the development of electronic portfolios'*. TechTrends, 48(3), 52-55.

[47] Abrami, P. C., & Barrett, H. (2005). *'Directions for research and development on electronic portfolios'*. Canadian Journal of Learning and Technology, 31(3), online version.

- [48] Canada, M. (2002). 'Assessing e-folios in the on-line class'. *New Directions for Teaching and Learning*(91), 69-75.
- [49] *Op. cit.*, note no. 50.
- [50] Abrami, P. C., & Barrett, H. (2005). 'Directions for research and development on electronic portfolios'. *Canadian Journal of Learning and Technology*, 31(3), online version.
- [51] Darling, L. F. (2001). 'Portfolio as practice: The narratives of emerging teachers'. *Teaching and Teacher Education*, 17(1), 107-121.
- [52] Smith, K., & Tillema, H. (2003). 'Clarifying different types of portfolio use. *Assessment and Evaluation in Higher Education*', 28(6), 625-648.
- [53] Young, J. R. (2002). 'E-portfolios' could give students a new sense of their accomplishments *Chronicle of Higher Education*', 48(26), A31-A32.
- [54] Sherry, A. C., & Bartlett, A. (2005). 'Worth of electronic portfolios to education majors: A 'two by four' perspective'. *Journal of Educational Technology Systems*, 33(4), 399-419.
- [55] Cambridge, B. L. (2001) 'Electronic portfolios as knowledge builders'. In B. L. Cambridge, S. Kahn, D. P. Tompkins & K. B. Yancey (Eds.), *Electronic portfolios: Emerging practices in student, faculty, and institutional learning* (pp. 1-11). Washington, DC: American Association for Higher Education.
- [56] Chang, C. (2001). 'Construction and evaluation of a web-based learning portfolio system: An electronic assessment tool'. *Innovations in Education and Teaching International*, 38(2), 144-155.
- [57] Philippa Butler, 'A Review Of The Literature On Portfolios And Electronic Portfolios' eCDF ePortfolio Project Massey University College of Education New Zealand October 2006.
- [58] This student would almost certainly have passed the module had the Webfolio been submitted.
- [59] All were first generation HE users.
- [60] Only one student failed the module, due to non-submission of the webfolio.



JILT 2009 (3)

Contents

- [Special Issue Editorial](#)
- [Editorial](#)

Refereed Articles

- [Simon Ball & Helen James](#)
- [Sefton Bloxham, Fiona Boyle & Ann Thanaraj](#)
- [Michael Bromby](#)
- [Clare Chambers](#)
- [Caroline Coles](#)

- [Catherine Easton](#)

Book Review

- [Book Review 1](#)
- [Book Review 2](#)



Tel: [+44 \(0\)24 7652 3075](tel:+44(0)2476523075)

Email: law@warwick.ac.uk

School of Law, University of Warwick, Coventry CV4 7AL, United Kingdom



Page contact: Unknown

Last revised: Wed 23 Dec 2009

Powered by [Sitebuilder](#) | [© MMXIX](#) | [Terms](#) | [Privacy](#) | [Cookies](#) | [Accessibility](#)